



# ELECTRONICS

Temasek Polytechnic  
School of Engineering



Empower our  
hyper-connected world  
driven by cutting-edge  
technologies!

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# ELECTRONICS



## Course Overview

This course will equip you with future-ready skill sets in emerging technologies such as advanced manufacturing, artificial intelligence and the Internet of Things, as well as their applications in various fields like healthcare, assistive technology, and green innovations and sustainability for the environment.

- Chance to do research & development in some of our Centres of Excellence – such as the TP Advanced Manufacturing Centre, Healthcare Engineering Centre, or Robotics & Automation Centre – which focus on the latest technologies
- Get the priceless experience of working with partners who are industry leaders and experts in their respective fields
- Gain more in-depth working experience under a one-year internship programme (compared to 16 weeks for most other diplomas)

## Career Opportunities

Singapore is home to many of the world's leading electronics and semiconductor manufacturers. With this diploma, you'll have dynamic and exciting career prospects in the many diverse sectors that use consumer and industrial electronics today, such as the aerospace, telecommunications, instrumentation & control, computing, consumer and industrial electronics industries.

Here are some of the exciting jobs that could be yours!

- Electronics / IoT / System Integration Engineers
- Automation / Maintenance / Equipment Engineers
- Production Process Engineers
- Sales / Marketing Engineers
- Software / Firmware / Embedded Engineers
- Sustainability Executives / Specialists



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## What You'll Study

Select the Elective Cluster that brings your dream job to life!

<b>Year 1:</b> <ul style="list-style-type: none"><li>• Circuit Analysis</li><li>• Computer Programming for Problem Solving</li><li>• Digital Fundamentals 1 &amp; 2</li><li>• Electronic Devices &amp; Circuits</li><li>• Electronic Prototyping</li><li>• Engineering Mathematics 1 &amp; 2</li><li>• Engineering Physics</li></ul>	<b>Intralogistics &amp; Cybersecurity Elective Cluster #</b> <ul style="list-style-type: none"><li>• Distribution Centre Management</li><li>• IoT Security</li></ul>
<b>Year 2:</b> <ul style="list-style-type: none"><li>• Advanced Electronics &amp; Communications</li><li>• Artificial Intelligence in Engineering</li><li>• Circuit &amp; Control Systems</li><li>• Data Visualisation &amp; Analytics</li><li>• Digital Sensors &amp; Integrated Circuit Applications</li><li>• Engineering Mathematics 3</li><li>• Integrated Project</li><li>• Microcontroller Applications</li><li>• Power Electronics &amp; Drives</li><li>• Printed Circuit Board Design</li></ul>	<b>Robotics Elective Cluster #</b> <ul style="list-style-type: none"><li>• Robotics &amp; Automation</li><li>• Smart Manufacturing System</li></ul> <b>Sustainability in Engineering Elective Cluster #</b> (Choose any 2 subjects under this cluster) <ul style="list-style-type: none"><li>• Green Urban Transportation &amp; Energy Storage</li><li>• Life Cycle Analysis</li><li>• Renewable Energy Technologies</li><li>• Solar Photovoltaic Technology &amp; Leasing</li></ul> <b>Wafer Fabrication Process &amp; Equipment Elective Cluster #</b> <ul style="list-style-type: none"><li>• Cleanroom &amp; Vacuum Technology</li><li>• Wafer Fabrication Technology</li></ul> <b>Structured Work-Based Learning Elective Cluster ^ #</b> <ul style="list-style-type: none"><li>• Work-Based Learning</li></ul>
<b>Year 3:</b> <ul style="list-style-type: none"><li>• Major Project</li></ul>	<b>University Pathway Programme (NUS) ^ #</b> <b>University Pathway Programme (SUTD) ^ #</b>
<b>Advanced Engineering Skills Elective Cluster #</b> <ul style="list-style-type: none"><li>• Advanced Skills Practices</li></ul>	<b># Students to choose one of these elective clusters</b> <b>^ For selected students</b>
<b>Avionics Elective Cluster #</b> <ul style="list-style-type: none"><li>• Aircraft Digital Systems</li><li>• Avionic Systems</li></ul>	
<b>Industrial Artificial Intelligence Elective Cluster #</b> <ul style="list-style-type: none"><li>• Edge Computing &amp; Machine Learning</li><li>• Industrial IoT Analytics</li></ul>	



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T65  
Diploma in  
Electronics



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